

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Mooresville Regional Office  
**County:** Cabarrus  
**NC Facility ID:** 1300164  
**Inspector's Name:** Melinda Wolanin  
**Date of Last Inspection:** 10/16/2018  
**Compliance Code:** 3 / Compliance - inspection

<p align="center"><b>Facility Data</b></p> <p><b>Applicant (Facility's Name):</b> Concord Energy, LLC</p> <p><b>Facility Address:</b> Concord Energy, LLC 5185 Morehead Road Concord, NC 28027</p> <p><b>SIC:</b> 4911 / Electric Services <b>NAICS:</b> 221119 / Other Electric Power Generation</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>				<p align="center"><b>Permit Applicability (this application only)</b></p> <p><b>SIP:</b> 02D .0516, 02D .0521, 02D .0524, 02D .1100, 02D .1111, 02D .1402, 02D .1409(b) <b>NSPS:</b> Subpart GG, Subpart JJJJ, Subpart KKKK, Subpart WWW <b>NESHAP:</b> Subpart ZZZZ <b>PSD:</b> N/A <b>PSD Avoidance:</b> 02Q .0317 avoidance of 02D .0531 <b>NC Toxics:</b> Yes <b>112(r):</b> N/A <b>Other:</b> TV permit renewal</p>																																																			
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<b>Review Engineer:</b> Urva Patel  <b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____	<b>Comments / Recommendations:</b> <b>Issue</b> 09985/T04 <b>Permit Issue Date:</b> _____ <b>Permit Expiration Date:</b> _____
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## 1. Purpose of Application:

Currently, Concord Energy, LLC holds Title V Permit No. 09985T03 with an expiration date of March 31, 2019.

This permit renewal consolidated two separate permits applications (**Application No.: 1300164.17A and 1300164.18A**).

### Application ID No.: 1300164.17A

The 502(b)(10) change notification application (**Application No. 1300164.17A**) was received on January 30, 2017. The facility has proposed to replace an existing Turbine with an identical Turbine (ID No. ES-TURB1-CHAR) by February 3, 2017.

### Application ID No.: 1300164.18A

The Title V renewal application (**Application No. 1300164.18A**) was received on June 26, 2018, which was nine months prior to expiration date of the Title V Permit. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

## 2. Facility Description:

Concord Energy, LLC is located in Concord, Mooresville County, North Carolina. This facility uses the landfill gas produced by the Charlotte Motor Speedway Landfill to run three combustion turbines to generate electricity that will be sold to Duke Energy Carolinas LLC (Duke) or another entity. The combustion turbines also use No. 2 fuel oil for cold startup only

One of these turbines was previously permitted as CMS Energy, LLC. Fortistar Methane Group (Fortistar) is the parent company for this facility and Concord Energy, LLC, and the two facilities were combined under Air Permit No 09985T03 issued to Concord Energy, LLC on April 23, 2014.

## 3. History / Background / Application Chronology:

### Permit History

April 23, 2014	Air Quality Permit No. 09985T03 issued with an expiration date of January 31, 2019 for the first-time TV air permit. The applicant requested that the facilities owned by parent company Fortistar be combined into one Title V permit under the company name Concord Energy LLC.
November 14, 2012	Air Quality Permit No. 09985R02 issued with an expiration date of July 31, 2014 for a State 300 permit modification. This modification included construction and operation of two landfill gas-fired, spark ignition, reciprocating internal combustion engines (Caterpillar Model G3520C, 2233 hp each). The modification also requested a State BACT (SB3) determination for this facility.

### Application Chronology

June 26, 2018	Received application for permit renewal.
July 9, 2018	Sent acknowledgement letter indicating that the application for permit was complete for processing.
March 21, 2019	Draft permit and permit forwarded for internal review.

## 4. Summary of Changes to the Existing Permit (Permit No. 09985T03):

Page No.	Section	Description of Changes
Cover Letter	N/A	<ul style="list-style-type: none"> <li>Updated cover letter with application number, permit numbers, dates, fee class, PSD increment statement, and Director name.</li> </ul>

Page No.	Section	Description of Changes
Permit Cover	N/A	<ul style="list-style-type: none"> <li>Inserted new issuance and complete application date, application number, facility information.</li> </ul>
8	2.1 A.3.iv	<ul style="list-style-type: none"> <li>Removed repeated iii to iv to be consistent with numbering</li> </ul>
8	2.1 B.1	<ul style="list-style-type: none"> <li>Revised numbering to be consistent with remaining permit i.e. switched from I,ii,iiii to a,b,c</li> </ul>
18	2.3	<ul style="list-style-type: none"> <li>Removal of “15A NCAC 02D .0544: PSD requirements for Greenhouse gases” as it was effective till July 2014.</li> </ul>
Permit	Section 2 and Section 3	<ul style="list-style-type: none"> <li>Updated regulation references from “2D” and “2Q” to “02D” and “02Q” to be consistent with regulation nomenclature.</li> </ul>
Permit	Section 3	<ul style="list-style-type: none"> <li>Updated General Conditions from version 5.2 to current shell version 5.3 (08/21/2018).</li> </ul>

## 5. Compliance Status:

DAQ has reviewed the compliance status of this facility. During the most recent inspection conducted on October 16, 2018, Melinda Wolanin of the Mooresville Regional Office indicated that the facility appeared to be in compliance with all applicable requirements. Additionally, a signed Title V Compliance Certification (Form E5) indicating that the facility was in compliance with all applicable requirements was submitted with Application No. 1300164.18A on June 26, 2018.

### *Five-year Compliance History:*

- The facility was inspected on November 12, 2013 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on October 28, 2014 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on December 8, 2015 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on October 13, 2016 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on October 11, 2017 and appeared to be in compliance with all applicable air quality regulations.
- The facility was inspected on October 16, 2018 and appeared to be in compliance with all applicable air quality regulations.

## 6. New/Modified Equipment/Changes in Emissions:

This is a permit renewal without modification. It does not change any emissions. The facility is expected to be in continued compliance.

## 7. Regulatory Review

Unless specifically noted, a detailed discussion of the following applicable permit conditions is not included as applicability status has not changed. The permit conditions have been modified to reflect the most current language, as necessary. The facility is expected to be in continued compliance.

- 15A NCAC 02D .0516: Sulfur Dioxide Emissions [CD-FLARE1-CON, ES-ICE1-CON, and ES-ICE2-CON]
- 15A NCAC 02D .0521: Control of Visible Emissions
- 15A NCAC 02D .0524: New Source Performance Standards (Subpart GG) [ES-TURB1-CHAR]
- 15A NCAC 02D .0524: New Source Performance Standards (Subpart JJJJ) [ES-ICE1-CON & ICE2-CON]
- 15A NCAC 02D .0524: New Source Performance Standards (Subpart KKKK) [ES-TURB1-CON & ES-TURB2-CON]
- 15A NCAC 02D .0524: New Source Performance Standards (Subpart WWW)
- 15A NCAC 02D .1100: Control of Toxic Air Pollutants (facility-wide)

- 15A NCAC 02D .1111: Control of Hazardous Air Pollutants from RICE engines (MACT Subpart ZZZZ) [ES-ICE1-CON and ES-ICE2-CON]
- 15A NCAC 02D .1402: Nitrogen Oxides Applicability (Cabarrus County)
- 15A NCAC 02D .1409(b): Nitrogen Oxides from Stationary Internal Combustion Engines [ES-ICE1-CON & ICE2-CON]
- 15A NCAC 02Q .0317: “Avoidance” of 02D .0531 “Sources of Nonattainment” – Nitrogen Oxide

## 8. NSPS, NESHAP/MACT, NSR/PSD, 112(r), CAM

### NSPS

This facility is subject to the following New Source Performance Standards (NSPS) – 40 CFR 60.

- 40 CFR 60, Subpart GG “New Source Performance Standards for Stationary Gas Turbines” applies to Turbine (**ID No. ES-TURB1-CHAR**) because the heat input from this turbine is greater than 10 million Btu per hour and the turbine was constructed after October 3, 1977 but prior to May 19, 2009. The turbine is subject to the requirements 40 CFR §60.332 (e) and (j) of this subpart.
- 40 CFR 60, Subpart JJJJ “New Source Performance Standards for Spark Ignition Internal Combustion Engines” applies to generators (**ID Nos. ES-ICE1-CON and ES-ICE2-CON**) as this landfill gas-fired spark ignition reciprocating internal combustion engine has maximum power of 2233HP and this engine *will be* constructed on or after July 1, 2008. Therefore, *these engines, when installed, will be* subject to 40 CFR §60.4230 (a)(2)(i) of this subpart.
- 40 CFR 60, Subpart KKKK “New Source Performance Standards for Stationary Combustion Turbines” applies to Turbines (**ID Nos. ES-TURB1-CON and TURB2-CON**) because the heat input for each turbine is greater than 10 million Btu per hour and they were each reconstructed after May 19, 2009 (*New direct final rule was placed into the federal register on March 20, 2009*). The Turbines subject to NSPS Subpart KKKK are exempt from NSPS Subpart GG.
- 40 CFR 60, Subpart WWW  
This combined facility is not subject to the Municipal Solid Waste MACT (Subpart AAAA) standard because it is not a landfill. However, since the landfill gas that is supplied to these facilities is not first treated by the gas treatment system that is owned by the CMS Landfill, this facility does have compliance obligations for controlling NMOC emissions from the landfill pursuant to NSPS Subpart WWW. [40 CFR Part 60, §60.752(b)(2)(iii)]

### NESHAP/MACT

This facility is classified as a major source for HAPs emissions and is subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63. This permit renewal does not change this status.

- 40 CFR 63, Subpart ZZZZ “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”  
The generators (**ID Nos. ES-ICE1-CON and ES-ICE2-CON**), when installed, will be subject to subpart ZZZZ for area sources.
- 40 CFR 63, Subpart YYYY “National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines”  
The turbines (**ID Nos. ES-TURB1-CON, TURB1-CHAR, and TURB2-CON**) are not subject to MACT Subpart YYYY (for combustion turbines) because the aggregation of hazardous air pollutants from both facilities (Concord Energy LLC and CMS Energy LLC) is less than the major source thresholds (10/25 tpy).

### NSR/PSD

Cabarrus county is currently designated as attainment for all PSD regulated pollutants. Cabarrus County is triggered for PM10 and SO<sub>2</sub> emissions with respect to minor source baseline date.

This combined facility is currently a major PSD source due to the emissions of carbon monoxide. There are no emissions increases due to this application.

This permit renewal does not change facility's potential emissions. Therefore, the emission limit does not need to be reevaluated. Continued compliance is expected.

### **112(r)**

This facility is **NOT** subject to the requirements of the Chemical Accident Release Prevention Program, Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above applicability thresholds.

### **Compliance Assurance Monitoring (CAM)**

Pursuant to 40 CFR 64.2, the provisions of the Compliance Assurance Monitoring (CAM) rule are applicable to emission units that meet all of the following criteria:

- Criteria #1: The unit is subject to an emission limitation AND uses a control device to achieve compliance with the limit;
- Criteria #2: The unit has pre-control potential emissions that are equal to or greater than 100% of the amount (in tpy) required for a source to be classified as a major source (i.e., 100 tpy of any criteria pollutant or 10 tpy of any HAP); and,
- Criteria #3: The unit is not exempt under 40 CFR 64.2(b).

The facility is **NOT** subject to Compliance Assurance Monitoring (CAM) because these sources are regulated by both an NSPS and MACT that were promulgated after 1990 and control the pollutants that would be subject to CAM.

### **9. Facility-Wide Air Toxics:**

The air permit for Concord Energy LLC (09985R02) contained a "Schedule of Compliance" in Section 2.2 of the permit, requesting a modeling demonstration for toxic air pollutants at this facility. The modeling demonstration was submitted to the DAQ on February 7, 2013 and demonstrated compliance on a source-by-source basis for all of the toxic air pollutants that were modeled from both Concord Energy, LLC and CMS Energy, LLC. As noted previously, the two facilities were combined under Air Permit No 09985T03 issued to Concord Energy, LLC on April 23, 2014.

This permit renewal does not change potential emissions. Therefore, no further air toxics evaluation is required at this time.

### **10. Facility Emission Review:**

There are no changes in potential emissions under this permit renewal. Actual emissions for 2013 through 2017 are reported in the header of this permit review.

### **11. Other Regulatory Considerations:**

- A Permit Application fee is NOT required for Permit Application No. 1300164.18A.
- A P.E. Seal is NOT required for Permit Application No. 1300164.18A.
- A zoning consistency determination is NOT required for Permit Application No. 1300164.18A.
- A 30-day public notice is required for Permit Application No. 1300164.18A.

### **12. Public Notice and Affected State(s) Review**

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. Forsyth County and Mecklenburg County are affected local programs within 50 miles of the facility.

### **13. Recommendations/Conclusion:**

TBD

